

WHAT IS CLAIMED IS:

1. A seatbelt retractor, comprising a frictional clutching means equipped in a drum, which reduces rotating speed of a drum shaft where a webbing and a spiral spring are
5 fixed in response to the expansion of said spiral spring during a retraction of the webbing.
2. A seatbelt retractor according to claim 1, wherein the frictional clutching means comprises:
10 a first rod member slideably inserted into a guide element so that the first rod member can slide through said guide element in accordance with expansion of a spiral spring, the first rod member being provided with a guide slot at the center thereof;
a restoring spring installed at one end of said first rod member for elastically supporting said first rod member;
15 a gear member pivotally fixed to a drum by a pivot shaft and slideably connected to said guide slot by a guide pin; and,
a second rod member that slideably moves engaging with tooth of said gear member.
- 20 3. A seatbelt retractor according to claim 2, wherein the second rod member has a semicircular recess at one end thereof for contact with a circumference of the drum shaft.
4. A seatbelt retractor according to claim 3, wherein the second rod member is
25 composed of two parts that are elastically supported with each other by a spring.
5. A seatbelt retractor according to claim 2, wherein the second rod member is composed of two parts that are elastically supported with each other by a spring.
- 30 6. A seatbelt retractor, comprising:
a drum containing a rotatable drum shaft and a spiral spring acting between the drum and shaft, said shaft configured and dimensioned for winding a seatbelt webbing thereon; and
a frictional clutch operatively connected to said spiral spring and acting on said

drum shaft in response to an increase in diameter of the spiral spring.

7. The seatbelt retractor of claim 6, wherein said frictional clutch comprises:
an actuator rod slidably mounted with the drum and bearing against the spiral
5 spring;
a friction rod bearing against the drum shaft;
a linkage operatively connecting the actuator rod and friction rod so as to apply
pressure to the drum shaft in response to expansion of the spiral spring.
- 10 8. The seatbelt retractor of claim 7, further comprising a biasing element acting on
said actuator rod to bias it against the spiral spring.
9. The seatbelt retractor of claim 7, wherein said linkage comprises:
a gear segment pivotably mounted between said rods;
15 a first end of said gear segment being acted on by said actuator rod; and
a second, geared end of said gear segment being engaged with gear
teeth formed on said friction rod.
10. The seatbelt retractor of claim 7 wherein said friction rod comprises a first part
20 and a second part with a biasing element acting therebetween.